ShiNung Ching

List of Publications by Year
in descending order

61	1,147	759233 12	434195 31
papers	citations	h-index	g-index

66	66	66	1200
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Enhancing task fMRI preprocessing via individualized modelâ€based filtering of intrinsic activity dynamics. NeuroImage, 2022, 247, 118836.	4.2	3
2	Resolving and characterizing the incidence of millihertz EEG modulation in critically ill children. Clinical Neurophysiology, 2022, 137, 84-91.	1.5	5
3	Non-Stationary Representation Learning in Sequential Linear Bandits. , 2022, 1, 41-56.		5
4	Developing control-theoretic objectives for large-scale brain dynamics and cognitive enhancement. Annual Reviews in Control, 2022, 54, 363-376.	7.9	3
5	Detecting slow narrowband modulation in EEG signals. Journal of Neuroscience Methods, 2022, 378, 109660.	2.5	2
6	Macroperiodic Oscillations Are Associated With Seizures Following Acquired Brain Injury in Young Children. Journal of Clinical Neurophysiology, 2021, Publish Ahead of Print, .	1.7	6
7	Postictal generalized electroencephalographic suppression following electroconvulsive therapy: Temporal characteristics and impact of anesthetic regimen. Clinical Neurophysiology, 2021, 132, 977-983.	1.5	3
8	Localizing focal brain injury via EEG spectral variance. Biomedical Signal Processing and Control, 2021, 68, 102746.	5.7	2
9	Slow manifolds within network dynamics encode working memory efficiently and robustly. PLoS Computational Biology, 2021, 17, e1009366.	3.2	9
10	Synthesis of recurrent neural dynamics for monotone inclusion with application to Bayesian inference. Neural Networks, 2020, 131, 231-241.	5.9	0
11	Computing and optimizing over all fixed-points of discrete systems on large networks. Journal of the Royal Society Interface, 2020, 17, 20200126.	3.4	1
12	Voltage-based automated detection of postictal generalized electroencephalographic suppression: Algorithm development and validation. Clinical Neurophysiology, 2020, 131, 2817-2825.	1.5	4
13	Estimation and validation of individualized dynamic brain models with resting state fMRI. NeuroImage, 2020, 221, 117046.	4.2	32
14	Creating functionally favorable neural dynamics by maximizing information capacity. Neurocomputing, 2020, 400, 285-293.	5.9	0
15	Neural Circuit Dynamics for Sensory Detection. Journal of Neuroscience, 2020, 40, 3408-3423.	3.6	1
16	Learning to Control Neurons using Aggregated Measurements. , 2020, , .		2
17	Biophysically interpretable inference of single neuron dynamics. Journal of Computational Neuroscience, 2019, 47, 61-76.	1.0	2
18	Multiple Timescale Online Learning Rules for Information Maximization with Energetic Constraints. Neural Computation, 2019, 31, 943-979.	2.2	0

#	Article	IF	Citations
19	A Learning Framework for Controlling Spiking Neural Networks. , 2019, , .		3
20	Spiking networks as efficient distributed controllers. Biological Cybernetics, 2019, 113, 179-190.	1.3	2
21	Defining information-based functional objectives for neurostimulation and control. , 2019, , .		0
22	Sensitivity of linear systems to input orientation and novelty. Automatica, 2018, 93, 462-468.	5.0	1
23	Control-Theoretic Approaches for Modeling, Analyzing, and Manipulating Neuronal (In)activity. , 2018, , 219-238.		0
24	Control Analysis and Design for Statistical Models of Spiking Networks. IEEE Transactions on Control of Network Systems, 2018, 5, 1146-1156.	3.7	8
25	Dimensionality reduction impedes the extraction of dynamic functional connectivity states from fMRI recordings of resting wakefulness. Journal of Neuroscience Methods, 2018, 293, 151-161.	2.5	6
26	Information spectra and optimal background states for dynamical networks. Scientific Reports, 2018, 8, 16181.	3.3	0
27	Network Restructuring Control for Conic Invariance with Application to Neural Networks. , 2018, , .		0
28	Intrinsic network reactivity differentiates levels of consciousness in comatose patients. Clinical Neurophysiology, 2018, 129, 2296-2305.	1.5	11
29	Geometric classification of brain network dynamics via conic derivative discriminants. Journal of Neuroscience Methods, 2018, 308, 88-105.	2.5	1
30	Learning-based Approaches for Controlling Neural Spiking. , 2018, 2018, .		2
31	Recurrent Information Optimization with Local, Metaplastic Synaptic Dynamics. Neural Computation, 2017, 29, 2528-2552.	2.2	2
32	Bispectral analysis for measuring energy-orientation tradeoffs in the control of linear systems. Systems and Control Letters, 2017, 102, 68-73.	2.3	2
33	On the Output of Nonlinear Systems Excited by Discrete Prolate Spheroidal Sequences. IEEE Transactions on Automatic Control, 2017, 62, 5780-5787.	5.7	1
34	Recurrent networks with soft-thresholding nonlinearities for lightweight coding. Neural Networks, 2017, 94, 212-219.	5.9	1
35	Homeostatic dynamics, hysteresis and synchronization in a low-dimensional model of burst suppression. Journal of Mathematical Biology, 2017, 74, 1011-1035.	1.9	12
36	Optimizing the dynamics of spiking networks for decoding and control. , 2017, , .		2

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37	Selective spiking in neuronal populations. , 2017, , .		3
38	High-energy brain dynamics during anesthesia-induced unconsciousness. Network Neuroscience, 2017, 1, 431-445.	2.6	15
39	EEG dynamical correlates of focal and diffuse causes of coma. BMC Neurology, 2017, 17, 197.	1.8	9
40	Fundamental Limits of Forced Asynchronous Spiking with Integrate and Fire Dynamics. Journal of Mathematical Neuroscience, 2017, 7, 11.	2.4	8
41	Identifying Disruptions in Intrinsic Brain Dynamics due to Severe Brain Injury. , 2017, 2017, 344-348.		0
42	Sevoflurane Alters Spatiotemporal Functional Connectivity Motifs That Link Resting-State Networks during Wakefulness. Frontiers in Neural Circuits, 2016, 10, 107.	2.8	21
43	Endpoint-based discriminability of minimum energy inputs. , 2016, , .		1
44	Relating observability and compressed sensing of time-varying signals in recurrent linear networks. Neural Networks, 2016, 83, 11-20.	5.9	11
45	Controlling point process generalized linear models of neural spiking. , 2016, , .		5
46	Quasilinearization-based controllability analysis of neuronal rate networks. , 2016, , .		5
47	The Geometry of Plasticity-Induced Sensitization in Isoinhibitory Rate Motifs. Neural Computation, 2016, 28, 1889-1926.	2.2	1
48	Controlling linear networks with minimally novel inputs. , 2015, , .		5
49	Neurocontrol: Methods, models and technologies for manipulating dynamics in the brain. , 2015, , .		12
50	The human burst suppression electroencephalogram of deep hypothermia. Clinical Neurophysiology, 2015, 126, 1901-1914.	1.5	33
51	Propofol and sevoflurane induce distinct burst suppression patterns in rats. Frontiers in Systems Neuroscience, 2014, 8, 237.	2.5	53
52	Non-negative inputs for underactuated control of spiking in coupled integrate-and-fire neurons. , 2014, , .		2
53	Modeling the dynamical effects of anesthesia on brain circuits. Current Opinion in Neurobiology, 2014, 25, 116-122.	4.2	94
54	Inferring evoked brain connectivity through adaptive perturbation. Journal of Computational Neuroscience, 2013, 34, 303-318.	1.0	17

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55	Real-time segmentation and tracking of brain metabolic state in ICU EEG recordings of burst suppression. , 2013, 2013, 7108-11.		12
56	Biophysical modeling of alpha rhythms during halothane-induced unconsciousness. , 2013, , 1104-1107.		2
57	Control strategies for underactuated neural ensembles driven by optogenetic stimulation. Frontiers in Neural Circuits, 2013, 7, 54.	2.8	35
58	Real-time Closed-loop Control in a Rodent Model of Medically Induced Coma Using Burst Suppression. Anesthesiology, 2013, 119, 848-860.	2.5	51
59	A neurophysiologicalâ€“metabolic model for burst suppression. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 3095-3100.	7.1	241
60	Distributed control in a mean-field cortical network model: Implications for seizure suppression. Physical Review E, 2012, 86, 021920.	2.1	41
61	Thalamocortical model for a propofol-induced Î±-rhythm associated with loss of consciousness. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 22665-22670.	7.1	331